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ABSTRACT

Academic psychology and education are too much theoretically and methodologically committed; they need "field commitment"--an orientation which allows the people who are working with problem children or adults to use any technique, any tools at their disposal that will enable them to perform most proficiently in a given situation. Until people spend more time really watching and recording behavior, we will not get many new ideas. It is possible to teach effective, functional behavior analysis and management to teachers and parents in 10 to 20 hours of instruction; in some cases, in 2 to 4 hours. One reason that it is possible, in addition to employing a common functional language for analyzing behavior, is that natural consequences have proven to be extremely effective. A class of 34 graduate students were required to find a child whose behavior they wished to accelerate or decelerate . They recorded the frequency of the behavior on graphs which were shown to the class on a large screen with an opaque projector. They described where they were having difficulty or why a particular approach did not work, and only after the class had exhausted its ability to comment and suggest did the instructor comment. This class, which had never had formal instruction in symbolic behavior analysis, outperformed groups taught by other procedures which had had formal instruction. This class and a group of fathers handled in the same manner had 100 percent success in modifying child behavior. (JS)

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Title: THEORETICAL BASIS OF BEHAVIOR MODIFICATION

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THEORETICAL BASIS FOR BEHAVIOR MODIFICATION[1]

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When you think about dying, you want to feel some sort of assurance that what you have done will flourish, that the corn you planted will be harvested. Such has been true of my own professional life. I spent the first five or six years of it convincing myself that the procedures we were using had great potential for helping man do something about his problems. During the next few years, I found out that there are just too many exciting things to be done for any one man to be able to cope with all of them. After still more years, I found out that there is too much to be done for any one profession to accomplish. This holds true for the application of free-operant techniques and procedures. Thus, I have been spending less time in advancing the subdiscipline in which I personally work in order to train others. I would like to discuss how to teach these people most efficiently and effectively.

One of the difficult problems with which we are faced is that some of the people who shared with me the teaching of B. F. Skinner have become professionalized and are teaching their studetns to do things in exactly the same way in which they were taught. In other words, many people are spending most of their energy trying to make sure that Osgood's theory of perception does not die in our time, that Skinner's book, The Behavior of Organisms, will live without change, or that our own words of ten years ago will still be held valid. Instructors are actually teaching only the history of operant conditioning. This concerns me greatly. We are an infant with a potential that exceeds my imagination.

To cut this up into courses, start testing for it; in other words, to dress it up in academic paraphernalia is ridiculous!

Associated with a strong academic orientation are other problems with which a professional becomes involved today. I have found that in maintaining my own behavior, it is extremely difficult to discover which habits, which behaviors, can be dispensed with and which are absolutely necessary to perform the current tasks that I have assigned myself. Professionalism seems to be one of the major problems facing all the disciplines concerned with behavior today -- psychology, education, nursing, psychiatry, and so forth. The argument is not: How can we change the child? Rather it is: Who is going to get the major share of a mental retardation center, or how is the proposal going to be written up? The discussion is not over: How can we help the child, or teach the teacher? The fight seems to be over: Who is going to have three semester hours for student teaching, what is going to be said, and which textbook is going to be used.

I think, however, education is in better position in regard to this issue than academic psychology. Education is oriented towards service. Probably this is what keeps people in education from spending over four hours a day concerned with personal power. My own hunch is that if psychology had produced a large group of service personnel in the last two or three decades, it would not be stifled by professionalism. For example, there was a tremendous pressure put on psychology after it "sold" tests to give these tests. Some people, who were mostly practitioners, thought it might be feasible to use terminal masters students as testers. However, the academicians won that battle when they demanded that every practitioner be a purple-hooded Ph.D..

Because the academicians won, we have a structure in which there are all peers and no troops, all generals and no one to go out to the front-line trenches.

Another problem in psychology, and the other disciplines concerned with behavior, is commitment. The committed person is the kind of fellow who thinks about his work on Saturday or even early in the morning while he shaves. He has a high rate of performance with respect to his profession. However, there is differential commitment among our professionals. So within these disciplines, for descriptive purposes, I talk about theoretical commitment, methodological commitment, or problem or field commitment.

I think education and psychology are too much theoretically and methodologically committed. If a professional group is primarily theoretically committed, as are the Freudians and the clinical psychologists, their approach cannot long endure. It will not endure when other approaches can be demonstrated to work immediately, efficiently, and more effectively. What we need is to develop an orientation which allows the people who are working with problem children or adults to use any technique, any tools at their disposal that will enable them to perform most proficiently in a given situation. Such an orientation would be field commitment. We have far too few people in this category in our professions.

What I am concerned about and what I want to share with you are some of the ways that you can keep an original element of operant conditioning. Skinner used to say, "The rat knows best; that is why we have him in the experiment. If we knew so much, we could put a mechanical rat in, or make predictions ourselves." Translated

to human behavior, what this means is: "The child knows best".

This original element of operant conditioning allows us to learn from the child, from observation of human behavior. For example, if one child shows you that the approval of another child is more powerful than all the M&M's you have ever brought, and you still persist with M&M's or tokens, then you are committed to a method or theory--not to the best way to work with this child! If, on the other hand, you realize what is significant to the child, you throw away the M&M's for a better technique. That would be an example of being child committed and field oriented.

It has been my experience that there are far too few professionals to work with the behavior problems of our children in the homes and schools today. And I have concluded that if we are going to do anything about behaviorally managing the children of this country, it has got to be done with teachers and parents as agents. They are the ones who work directly with our children.

When I began to teach teachers, one of the first things I found out was that the language we were going to use was atrocious. Not only did it fail to build on the language they had already learned; it actually worked counter to their language. We spoke of stimuli that followed responses. That is a difficult way to talk about behavior. If I tell a teacher, "One thing about behavior is that there is a stimulus, a response, and a stimulus that is a reinforcing stimulus," she looks at me perplexed for a minute before she concludes that she doens't want to go back to school and buy new textbooks before she can even understand the language. Furthermore, that kind of talk is a bad

instructional system--it does not produce the behavior that we want. Once when instructors were trying to teach pilots in the Air Force, they used a system where red meant "right" and green meant "left." This system wasn't functional, because pilots knew that the red light was always on the left wing and the green light was on the right wing. They couldn't learn another system that went counter to the "color language" that they had known for years. Similarly, the red and green traffic signals are intregal with our driving behavior, and we couldn't very well change the meaning of these lights.

Therefore, we decided not to speak about stimuli and reinforcing stimuli. We decided that a reinforcing stimulus is the powerful thing which builds behavior. You follow a certain behavior with it to increase the probability of the occurrence of the movement or response on future occasions. In searching for a term that would mean precisely that, we wondered what is wrong with acceleration? If you have a reinforcing stimulus, or a consequence, that increases the probability of the occurrence of a behavior on future occasions, you know it. No one asks, "How you can tell if a consequence is accelerating?" Obviously, the consequence is accelerating when the behavior increases on future occasions. Conversely, deceleration is the lessening of or decreasing the probability of a recurrence on future occasions.

The reason acceleration and deceleration, or accelerating and decelerating consequences are good terms to use with teachers is that they are functional. They mean something from the teacher's point of view, and they mean something from the child's point of view. The teacher and the child are immediately aware of the effect.

I find it very easy to teach functional behavior analysis in one hour or two hours to parents and teachers for two reasons: 1) if the teacher, or if the child himself chooses a consequence that is meaningful for him, then there is a high probability that it is going to work, and 2) if it doesn't work, then we know something else is happening.

We know, from the child's point of view, if he has the teacher under his control instead of vice versa. She may be maintaining his talking out behavior by the very attention she pays to him to get him to stop it. In order for teachers to understand what may be happening, we have worked out a few simple functional ways to analyze behavior. You have to realize if the child is in a room, and now and then a candy drops, and he is not even aware that he is wriggling, you have no behavior control. You should not assert the consequence, but you might try other movements. We have techniques for response building, consequence building, and stimulus building.

These terms are about all we talk about, because if you stress talk with your class of teachers, only about 30 percent of them are going to change the behavior of the children in the classroom as a result. The reason it is not enough to teach "verbal behavior:" is: What are the consequences for the teacher? Talk only stimulates behavior; it does not consequate it. Therefore, I stopped explaining behavior when questions were asked. Now the first thing I require is that my students find a child who has a behavior they wish to accelerate or decelerate. They cannot come back to class until they have chosen this behavior as a target for deceleration or acceleration. Also, they must have a record of the frequency of the behavior. How often does it occur? Is it cyclical? The record or the graph can tell us the answers to these

questions precisely.

The graduate courses I teach now have two grades that I have never used before: I and F. The I represents "incomplete modification of a child's behavior." The F is given for "falsified data." By the eighth meeting of last semester, 100 percent of the students in one of my classes had a behavior modification case under surveillance. This class no longer has lectures. Students bring their graphs in and show them on a large screen with an opaque projector. They describe where they are having difficulty or why a particular approach did not work. Only after the class has exhausted its ability to comment and suggest, will I comment. On the basis of this approach to teaching, I gave a pen and pencil test that I have given before to groups taught by other procedures. This last class, which had never had formal instruction in symbolic behavioral analysis, outperformed groups which had. I believed they did so because they had higher motivation and because natural consequences were operating. Natural consequences mean that the students were affected by the success of their projects, by the knowledge that they had modified the behavior of a child, and that they had the records to prove it. A teacher can take these records to a principal and say, "This is what was happening with Billy before I tried such and such for so many days, and this was the result of my modification. Now Billy is no longer a problem. I have thirty days of post-modification data to show this." The most important aspect of the natural consequences is that Billy is no longer a problem to the teacher. Now she can work more effectively with the twenty-six other students in her classroom.

Another aspect of natural consequation is allied with an interesting dimension of my current teaching. When I was younger, I was told that the last patient in the world

you should work with was your wife or youself because of your bias. Now, however, we know how to observe and to record behavior with techniques that eliminate this bias. There is an advantage in working with people close to you because you are able to maximize the consequences. When my graduate students come to me and say, "I want to work with my daughter's speech problem or my sister's weight problem or my own smoking," I tell them, " That is fine. Someone near you is the best person you can work with. When you have succeeded in changing that person's behavior, you yourself are consequated. What you have done means something to you." This is another instance of the greater power natural consequences put into our instructional system than synthetic ones ever could.

The class that I referred to was composed of 34 graduate students. One hundred percent of them successfully modified childrens' behavior in a 15-week semester course, which met two hours each week. The median number of successful cases when only one was requested was 3.2 per student. I think that next semester I might ask for four cases, two of which are to have acceleration targets, and two deceleration, I used to be happy with a 30 percent modification of a single case. Now I want 100 percent modification. I really don't know what the upper limit is in the number of behavior problems a single individual can handle in a certain length of time. I do know that I am getting many more successful cases than I would have expected. I handled a father's group in this manner, and again 100 percent of the fathers succeeded with the deceleration target for the behaviors of their retarded children. I never saw any of these children. I just talked with the fathers. It is these kinds of findings that

convince me a lot of time is being wasted teaching the "history" of our science.

From our point of view, the only measure of a good teacher or good methods or good schools is the performance, the daily performance of the children. Most teachers will tell you, "We do not have any measure of daily performance. It just would be impossible to measure the behavior of every child every day." Many teachers have been told that the way you measure a child's performance is to give him a test. Tests are not measurements of child's performance -- just samples of it! We have been working on the direct measurement of children's behavior in the classroom. We feel we have had some success.

We have found that there is a lot of recording skill available in the classroom which has never been tapped. If a child can add and subtract and divide and tell time, then he can record his own behavior. He can record the time it takes him to do a certain number of problems of arithmetic and divide that into the number of correct problems to get the rate of correct problems per minute. This self-recording of data acts as a big accelerating consequence. We have been able to accelerate performance in children with whom we had originally failed while the teacher was recording the behavior. I wish to stress, however, that recording numbers alone is not a sufficient consequence. By making a graph of his performance, the child can see how much he has improved. It seems to me that we make graphs instead of tables because graphs do change behavior many times when tables do not. We now have fourth-and-fifth grade children plotting semi-log plots of their own performance.

SUMMARY

I have given examples of what I call field commitment. I believe that academic psychology and education lack this kind of commitment. Until the members of these professions spend more time really watching and recording behavior, more time in the classroom and wherever field commitment may lead them, we will not get many new ideas. Instead, we will have some more big buildings. It is possible to teach effective, functional behavior analysis and management to teachers and parents in 10 to 20 hours of instruction; in some cases, in two to four hours. One short-range reason this is possible is by employing a common functional language for analyzing behavior. Another reason, more important perhaps from the long-range viewpoint, is that natural consequences have proven to be extremely effective. Significant findings indicate the accelerating effect of self-graphing. We have had teachers, parents, graduate students, and school psychologists successfully modify behavior. There is a common dictum that, "The proof is in the pudding." We feel that the proof is in the classroom and in the home.

Footnotes

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2. The writer is indebted to the graduate students in his education classes and the fathers in his father's classes for making it possible to obtain this data.